

CLAIMS

1. In an aerial work apparatus having a boom mounted with respect to a mobile chassis, a aerial work platform attached with respect to the distal end of the boom, and a platform control module mounted with respect to the platform for controlling the position of the platform and movement of the chassis, the improvement comprising at least one material-handling device mounted with respect to the platform.
2. The aerial work apparatus of claim 1 wherein the material-handling device is a dual winch device having first and second winch assemblies and a winch control module.
3. The aerial work apparatus of claim 1 wherein the material-handling device is a fork lift device.
4. The aerial work apparatus of claim 1 wherein two material-handling devices are mounted with respect to the platform.
5. The aerial work apparatus of claim 4 wherein the first material-handling device is a dual winch device and the second material-handling device is a fork lift device.
6. The aerial work apparatus of claim 1 wherein the platform comprises:
 - a rail support frame attached with respect to the boom, the rail support frame having a boom side and an outer side; and
 - a work basket removably mounted to the rail support frame.
7. The aerial work apparatus of claim 6 wherein the work basket is a front basket mounted on the outer side of the rail support frame.

8. The aerial work apparatus of claim 7 wherein the material-handling device is at least two material support feet slidably attached to the front basket.

5 9. The aerial work apparatus of claim 7 wherein the material-handling device is a dual winch device having first and second winch assemblies and a winch control module, thereby facilitating leveling of substantially horizontally disposed loads.

10 10. The aerial work apparatus of claim 9 wherein each winch assembly has a winch-support, the winch-support having at least an upper winch-support member slidably disposed with respect to a lower winch-support member, whereby the operational height of the winch assembly can be raised and lowered.

15 11. The aerial work apparatus of claim 9 wherein each winch assembly has a winch-jib, the winch-jib having at least an outer winch-jib member slidably disposed with respect to an inner winch-jib member, whereby the operational extension of the winch assembly can be extended and retracted.

20 12. The aerial work apparatus of claim 9 wherein the first and second winch assemblies are mounted at opposite ends of the rail support frame.

13. The aerial work apparatus of claim 12 wherein the dual winch device is permanently attached to the rail support frame.

25 14. The aerial work apparatus of claim 9 further comprising at least two material support feet, the support feet being slidably attached to the front basket.

15. The aerial work apparatus of claim 6 wherein the work basket is a back basket mounted on the boom side of the rail support frame.

16. The aerial work apparatus of claim 15 wherein the material-handling device is a fork lift device having tines projecting from the outer side of the rail support frame.

5 17. The aerial work apparatus of claim 16 wherein the fork lift device is removably mounted to the outer side of the rail support frame.

18. The aerial work apparatus of claim 15 wherein the material-handling device is a dual winch device having first and second winch assemblies and a winch control module, thereby facilitating leveling of substantially horizontally disposed loads.

19. The aerial work apparatus of claim 17 further comprising a dual winch device.

15 20. In an aerial work apparatus having a boom mounted with respect to a boom base and a aerial work platform attached with respect to the distal end of the boom, the improvement comprising at least two material-handling devices mounted with respect to the platform.

20 21. The aerial work apparatus of claim 20 wherein one material-handling device is a dual winch device having first and second winch assemblies and a winch control module, thereby facilitating leveling of substantially horizontally disposed loads.

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22. The aerial work apparatus of claim 21 wherein each winch assembly comprises:

- 5 • a winch-support, the winch-support having at least an upper winch-support member slidably disposed with respect to a lower winch-support member, whereby the operational height of the winch assembly can be raised and lowered; and
- 10 • a winch-jib, the winch-jib having at least an outer winch-jib member slidably disposed with respect to an inner winch-jib member, whereby the operational extension of the winch assembly can be extended and retracted.

23. The aerial work apparatus of claim 22 wherein the first and second winch assemblies are mounted at opposite ends of the rail support frame.

15 24. The aerial work apparatus of claim 21 wherein the dual winch device is permanently attached to the platform.

25. The aerial work apparatus of claim 20 wherein one material-handling device is a fork lift device having tines projecting from the outer side of the platform.

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26. The aerial work apparatus of claim 25 wherein the fork lift device is removably mounted to the platform.

27. The aerial work apparatus of claim 20 wherein one material-handling device is at least two material support feet slidably attached to the platform.

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28. The aerial work apparatus of claim 20 wherein the platform comprises:

- 30 • a rail support frame attached with respect to the boom, the rail support frame having a boom side and an outer side; and
- a work basket removably mounted to the rail support frame.

29. The aerial work apparatus of claim 28 wherein the work basket is a front basket mounted on the outer side of the rail support frame.

5 30. The aerial work apparatus of claim 29 wherein one material-handling device is a dual winch device having first and second winch assemblies and a winch control module, thereby facilitating leveling of substantially horizontally disposed loads.

10 31. The aerial work apparatus of claim 29 wherein one material-handling device is at least two material support feet slidably attached to the front basket.

32. The aerial work apparatus of claim 28 wherein the work basket is a back basket mounted on the boom side of the rail support frame.

15 33. The aerial work apparatus of claim 32 wherein one material-handling device is a fork lift device having tines projecting from the outer side of the rail support frame.

20 34. The aerial work apparatus of claim 33 wherein the fork lift device is removably mounted to the outer side of the rail support frame.

25 35. The aerial work apparatus of claim 32 wherein one material-handling device is a dual winch device having first and second winch assemblies and a winch control module, thereby facilitating leveling of substantially horizontally disposed loads.

30 36. In an aerial work apparatus having a boom mounted with respect to a boom base and a aerial work platform attached with respect to the distal end of the boom, the improvement comprising a dual winch device mounted with respect to the platform, the device having first and second winch assemblies and a material control module.

37. The aerial work apparatus of claim 36 wherein each winch assembly comprises:

- 5 • a winch-support, the winch-support having at least an upper winch-support member slidably disposed with respect to a lower winch-support member, whereby the operational height of the winch assembly can be raised and lowered; and
- 10 • a winch-jib, the winch-jib having at least an outer winch-jib member slidably disposed with respect to an inner winch-jib member, whereby the operational extension of the winch assembly can be extended and retracted.

38. The aerial work apparatus of claim 37 wherein the dual winch device is permanently attached to the platform.

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39. In an aerial work apparatus having a boom mounted with respect to a boom base and a aerial work platform attached with respect to the distal end of the boom, the improvement comprising:

- 20 • a fork lift device mounted with respect to the platform; and
- a platform control module mounted with respect to the platform for controlling the position of the platform.

40. The aerial work apparatus of claim 39 wherein the fork lift device is removably mounted to the platform.

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41. In an aerial work apparatus having a boom mounted with respect to a boom base and a aerial work platform attached with respect to the distal end of the boom, the improvement wherein the platform comprises:

- 30 • a rail support frame attached with respect to the boom, the rail support frame having a boom side and an outer side; and
- a work basket removably mounted to the rail support frame.

42. The aerial work apparatus of claim 41 wherein the work basket is a front basket mounted on the outer side of the rail support frame.

5 43. The aerial work apparatus of claim 42 further comprising at least two material support feet slidably attached with respect to the front basket.

 44. The aerial work apparatus of claim 42 further comprising a dual winch device mounted with respect to the platform, the device having first and second winch
10 assemblies mounted at opposite ends of the rail support frame and a material control module.

 45. The aerial work apparatus of claim 41 wherein the work basket is a back basket mounted on the boom side of the rail support frame.

15 46. The aerial work apparatus of claim 45 further comprising a fork lift device having tines projecting from the outer side of the rail support frame.

 47. The aerial work apparatus of claim 46 wherein the fork lift device is
20 removably mounted to the outer side of the rail support frame.

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